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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,665	06/18/2001	Jackson C. Koo	IL-10726	2439

7590

03/20/2003

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EXAMINER

NGUYEN, LAM S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 03/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/883,665

Applicant(s)

KOO ET AL.

Examiner

LAM S NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 14-16 is/are rejected.
- 7) ☒ Claim(s) 11-13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The drawing lacks of all reference numbers. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-5, 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Vestal (US 4883958).

Vestal discloses an ion mobility sensor for simultaneously detecting both ion and molecules, including:

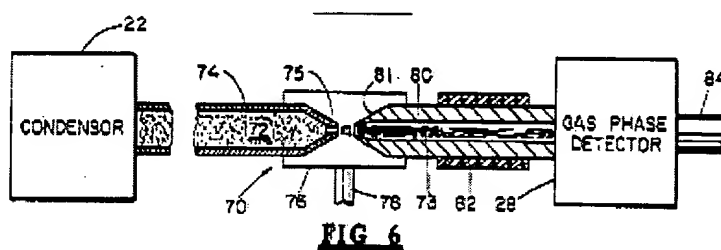
- a hollow housing (FIG. 5, element 146),
- a glow discharge ionizer mounted to one end of said hollow housing (FIG. 6, element 74), and
- a glow discharge detector mounted to an opposite end of said hollow housing (FIG. 6, element 81 and 28).

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Referring to claim 2: wherein said glow discharge ionizer includes a hollow tube and a pointed member coaxially mounted in said hollow tube (FIG. 6, element 74, 75).

Referring to claim 3: wherein said glow discharge detector includes a hollow tube and pointed member coaxially mounted in said hollow tube (FIG. 6, element 80).

Referring to claim 4: wherein said hollow tube of each of said glow discharge ionizer and said glow discharge detector is mounted opposite ends of said hollow housing (FIG. 6, elements 74, 80).



Referring to claim 5: wherein said glow discharge ionizer and said glow discharge detector are coaxially mounted in said housing and are coaxially aligned one with another (FIG. 6, elements 74, 80).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

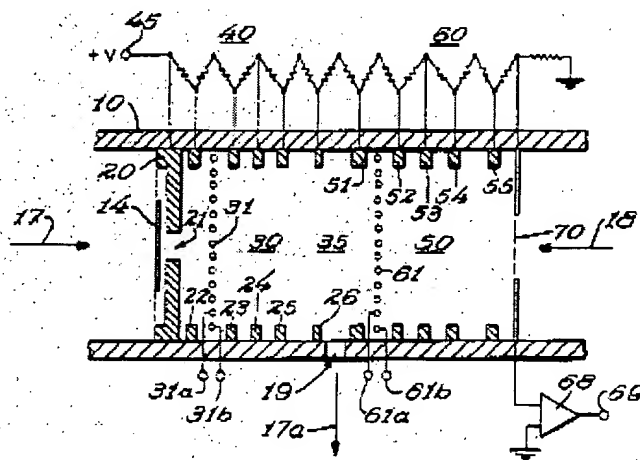
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6-10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vestal (US 4883958) in view of Castleman et al. (US 4238678).

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Vestal discloses the claimed invention as discussed above except including a pair of conductive members mounted around said hollow tubes of said ionizer and said detector, in contact with opposite ends of said hollow housing, and operatively connected to a power supply (**Referring to claim 6**), a plurality of conductive members having an opening therethrough mounted in spaced relation along a length of said hollow housing, and electrically connected to ground via a plurality of resistors (**Referring to claims 7, 10**), wherein each one of said plurality of resistors is mounted intermediate an adjacent pair of said plurality of conductive members (**Referring to claim 8**), wherein said hollow housing is composed of a plurality of sections, and wherein said plurality of conductive members are each mounted intermediate adjacent pairs of said plurality of housing sections (**Referring to claim 9**).

Castleman et al. disclose the claimed invention as discussed above except including a pair of conductive members mounted around said hollow tubes of said ionizer and said detector (FIG. 1, element 20 and the right most electrode), in contact with opposite ends of said hollow housing, and operatively connected to a power supply, a plurality of conductive members (FIG. 1, elements 22-26 and 51-55) having an opening therethrough mounted in spaced relation along a



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length of said hollow housing, and electrically connected to ground via a plurality of resistors (FIG. 1) wherein each one of said plurality of resistors is mounted intermediate an adjacent pair of said plurality of conductive members, said hollow housing is composed of a plurality of sections, and wherein said plurality of conductive members are each mounted intermediate adjacent pairs of said plurality of housing sections (FIG. 1, sections 40, 60).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to mount a plurality of conductive members in spaced relation along a length of the hollow housing in the detection device disclosed by Vestal and electrically connect them to ground via a plurality of resistors wherein each one of said plurality of resistors is mounted intermediate an adjacent pair of said plurality of conductive members as disclosed by Castleman et al. The motivation of doing so is to enhance the sensitivity and selectivity in detection of trace gases and vapors as taught by Castleman et al. (column 1, line 49-52).

Allowable Subject Matter

3. Claims 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claim 11: The most pertinent fail to disclose wherein each opening in said plurality of conductive members is in alignment with said pointed member of each of said glow discharge ionizer and said glow discharge detector. Therefore, the claimed invention is not disclosed by the prior art.

Referring to claims 12-13: Allowable since their dependence on the allowable claim 11.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S NGUYEN whose telephone number is (703)305-3342.

The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BARLOW can be reached on (703)308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

LN

March 17, 2003